REMARKS

Claims 1-19 are pending in this application with claims 1-3, 5, 7, 8, 12-14, and 17 being amended and claim 15 being cancelled by this response. Support for these amendments may be found throughout the specification and drawing figures and, more specifically on page 6, lines 23-29, page 7, lines 5-17, page 7, line 29, page 8, lines 5-10, page 8, lines 19-27, page 9, lines 13-26, page 10, lines 20-27, page 11, lines 9-29, page 12, lines 5-29, page 13, lines 5-15, page 14, lines 13-22, page 15, lines 7-29, page 16, lines 5-11, page 18, lines 15-27. Applicant respectfully submits that no new matter is added by these amendments.

Objection to the Specification

The specification is objected to in view of the informalities identified on page 1 of the Office Action. Applicant has formally amended the specification in accordance with the Examiners suggestion. Consequently, withdrawal of the objection is respectfully requested.

Rejection of Claims 1-19 under 35 U.S.C. § 102(b)

Claims 1-19 are rejected under 35 U.S.C 102 (b) as being anticipated by Gombrich ET al. (U.S. Patent No. 4,857,716).

Amended claim 1 provides a system for managing information relating to a patient in a hospital environment. A plurality of information processing systems are provided and include a laboratory information system and a pharmacy information system. The laboratory information system processes data related to performing, tracking and managing laboratory tests and the pharmacy information system processes data related to performing, tracking and managing pharmacy tasks and is usable by a pharmacist for processing information relating to a patient. Each of the plurality of information processing systems are associated with a respective department in a hospital responsible for implementing a particular hospital function, and are remotely located from one another. A control server is in communication with each of the plurality of information processing systems for managing department specific patient related information. A portable data terminal is enabled for bidirectional communication between the portable data terminal, laboratory information system, and pharmacy information system via the control server. The portable data terminal receives data representing at least one healthcare task to be performed on the patient and laboratory test

result information from the laboratory information system and medication related information from the pharmacy information system are displayed on the portable data terminal which is useable by a healthcare professional. The portable data terminal also conveys test and medication administration related data input by the healthcare professional to the laboratory information system and the pharmacy information system. For the reasons discussed below, Gombrich fails to disclose or suggest the features of amended claim 1.

Gombrich describes a patient identification system for relating items with patients and ensuring that an identified item corresponds to an identified patient. The patient identification system includes a computer system interconnected to a plurality of remote terminals by conventional telephone wiring. The patient identification system further includes a portable bar code reading device including a bar code wand, an LCD display and a key pad. The portable bar code reading device communicates via RF transmission with an RF/PLC modem. The bar code reading device communicates via RF transmission with an RF/PLC modem. The bar code reading device is utilized to read a patient's unique bar codes on a patient's identification bracelet, bar codes on labels attached to various items in the hospital relating the item to a specific patient and bar codes on item labels whereby such items can be automatically correlated to a specific patient and checks performed at the computer system to ensure that the item properly corresponds to the identified patient. (See Abstract)

It is respectfully submitted that Gombrich describes a system unrelated to the claimed system. The claimed system, unlike Gombrich, shows "a portable data terminal enabling bidirectional communication" between the portable data terminal and a laboratory information system, and pharmacy information system "via a control server." Gombrich fails to disclose or suggest such a system. Rather, Gombrich merely provides a barcode reader. There is nothing in Gombrich that discloses or suggest that the portable data terminal receives "data representing at least one healthcare task to be performed" on a patient and "laboratory test result information" from the "laboratory information system and medication related information" from the "pharmacy information system for display" on the portable data terminal. Instead, and contrary to the claimed arrangement, the Gombrich terminal is merely a reader and is unable to engage in bidirectional communication with any other system of any type and certainly not with either a laboratory information system or a pharmacy information

system. The claimed system provides for a fully integrated bidirectional communication system that enables a healthcare professional to use a portable data terminal indicating a certain task needs to be performed on a patient at a patient bedside based on information from different hospital department specific information processing systems responsible for processing patient specific data. Gombrich fails to disclose an equivalent system. Additionally, and in contrast to Gombrich, the portable data terminal conveys to the laboratory information system and pharmacy information system "test and medication administration related data input using said portable data entered by a user" Specifically, Gombrich neither discloses nor suggests the use of a portable device that supports bidirectional acquisition of medication and sample data in a system that integrates both a pharmacy information system and a laboratory information system. In fact, Gombrich fails to disclose or suggest "a plurality of information processing systems including a laboratory information system for processing data related to performing, tracking and managing laboratory tests and a pharmacy information system for processing data related to performing, tracking and managing pharmacy tasks and usable by a pharmacist for processing information relating to a patient, each of said plurality of information processing systems being associated with a respective department in a hospitable responsible for implementing a particular hospital function" as recited in amended claim 1 of the present arrangement. Gombrich only describes a computer system with terminals that are "located locally and at remote locations as required; for example, in the pharmacy, in the laboratory, in the supply room, in X-ray, in radiology, in the billing department" (col. 8, lines 26-30). The computers described in Gombrich are not equivalent to the "plurality of information processing systems being associated with a respective department in a hospital responsible for implementing a particular hospital function" as recited in amended claim 1 of the present arrangement.

Moreover, unlike the claimed system, Gombrich merely describes a "portable bar code reading device 48 which will be used to read the patient and item identification bar codes (col. 8, lines 56-58). "In ordering a laboratory test, a nurse or other staff person will scan the patient's identification bar code on the patient's chart, and scan or scroll for the bar code for the rest required . . . The computer system 42 will then indicate if this is the correct patient and the correct test by access to the lab test data file which correlates patients to specific lab tests to be performed . . . The process will take place in the patient's room. Back in the lab, the technician will scan the patient's identifier bar code on the test sample, perform the test

and enter the results into a lab test computer via the terminal 45d" (col. 17, lines 35-59). Gombrich explicitly states that "[t]he lab test results will be entered into an existing and separate lab test computer system (col. 17, lines 59-60). The computer of Gombrich is not equivalent to a "laboratory information system" or "pharmacy information system" of the present claimed arrangement. Furthermore, the system as described in Gombrich fails to provide an integrated bidirectional communication system enabling interaction between different information processing systems and portable data terminal for use at a patient bedside in different hospital units. In the present claimed arrangement, a healthcare professional "may scan with scanner 46 of portable data terminal 40d an employee identification code . . . in order to record data relating to the technician performing analysis of the sample. Testing of the blood sample according to the test order can then be undertaken, for example, employing various analytical instrumentation 32 within the laboratory" (page 18, lines 15-19). The "analytical instrumentation 32 is in communication with control server 20 . . . In this matter, data relating to the results of the analytical testing of the blood sample can be automatically recorded and transferred to the appropriate information system such as laboratory information system 11 by analytical instrumentation 32 through terminal server 30b. Alternatively, data relating to the results may be input into portable data terminal 40d" where the "data can then be transferred to the appropriate information processing system through terminal server 30b and control server 20" (Page 18, lines 20-27).

Gombrich is wholly unlike the claimed system, because, as stated, Gombrich is silent regarding "a portable data terminal enabling bidirectional communication between said portable data terminal and said laboratory information system and said pharmacy information system via said control server" as recited in amended claim 1 of the present arrangement. Specifically, Gombrich fails to provide enabling disclosure of a "plurality of information systems is in two-way communication with control server 20 through information serial connections 15a, 15b, and 15c, respectfully. Such information serial connections 15a, 15b, and 15c provide direct, two-way communication of information and data between laboratory information system 11, pharmacy information system 12, and hospital administration system 13. Moreover, each of laboratory information system 11, pharmacy information system 12, and hospital administration system 13 are capable of intercommunicating with each other through the communication link maintained through control server 20 (page 9, lines 15-27). Moreover, the claimed portable data terminal, in addition to reading patient information at a

patient bedside, is "in two-way communication" with the control server and receives data indicating "that an order has been received. Nurse Z retrieves portable data terminal 40a from terminal server 30a. Display 42 of portable data terminal 40a indicates that a blood sample is required from Patient X and that an antibiotic is to be administered to Patient Y. Nurse Z then performs sampling rounds and medication rounds, either individually or at the same time, according to the orders communicated to the portable data terminal 40a (Page 14, lines 25-30 through Page 15, line 1). Gombrich is fundamentally different from the claimed system because operation as described above is not possible in view of the portable barcode reader described therein. There is nothing in Gombrich that discloses or suggests that the portable barcode reader of Gombrich functions as described in the present claimed arrangement which provides a seamless integrated healthcare system where samples, or "test result information" or "medication related information" are displayed in conjunction with each other in order to prevent conflict situations such as when it is necessary to take samples before or after each other in a strict time relationship. The portable data terminal facilitates the sending of data related to "test result information" or "medication related information" at the patient's bedside.

Gombrich fails to disclose or suggest "a portable data terminal enabling bidirectional communication between said portable data terminal and said laboratory information system and said pharmacy information system via said control server, said portable data terminal receiving data representing at least one healthcare task to be performed on said patient and laboratory test result information from said laboratory information system and medication related information from said pharmacy information system for display on said portable data terminal useable by a healthcare professional and conveying test and medication administration related data input using said portable data by a user to said laboratory information system and said pharmacy information system". Gombrich, instead, requires the data to be entered into a computer at an "existing and separate" place for analysis and makes no mention whatsoever of "bidirectional communication" between a "portable data terminal" and "laboratory information systems" and "pharmacy information systems" via a "control server." Therefore, Gombrich fails to disclose or suggest a system including the features claimed in amended claim 1. Consequently, it is respectfully submitted that the rejection of claim 1 under 35 USC 102(b) be withdrawn.

Claim 2 is dependent on claim 1 and is considered patentable for the reasons presented above with respect to claim 1. Claim 2 is also considered patentable because Gombrich neither discloses nor suggests that "said laboratory information system and said pharmacy information system are in integrated bidirectional communication with said portable data terminal" as recited in amended claim 2 of the present arrangement. Specifically, Gombrich fails to show or suggest a system in which "said laboratory information system and said pharmacy information system are in integrated bidirectional communication with said portable data terminal." Gombrich merely describes that a "computer system" includes "terminals 45 including a keyboard and a display for input of data to and output of data from the computer system 42". " (col. 8, lines 23-27). There is nothing in Gombrich that discloses or suggests integration between a laboratory information system and a pharmacy information system with a portable data terminal enabling bidirectional communication therebetween. Additionally, Gombrich fails to disclose or suggest a "plurality of information processing systems comprising hospital information systems, pharmacy information systems, radiology information systems and accounting information systems, and said healthcare task includes at least one medication administration event, a test conducted on a patient, specimen collection and a billing process" as in the claimed arrangement. As discussed above, data representing healthcare tasks are provided from any of the plurality of information processing systems to the portable data terminal for display thereon for notifying a healthcare professional that a task need be performed. Gombrich discloses a system that merely enables a user to read patient information and NOT receive data representing a healthcare task to be performed on a patient for display on the portable data terminal. Consequently, it is respectfully submitted that the rejection of claim 2 under 35 USC 102(b) be withdrawn.

Claim 3 is dependent on claim 1 and is considered patentable for the reasons presented above with respect to claim 1. Claim 3 is also considered patentable because Gombrich fails to disclose or suggest "a plurality of portable data terminals associated with respective different patient units each in integrated bidirectional communication with said laboratory information system and said pharmacy information system, and said control server automatically conveys laboratory test information received from said laboratory information system and medication related information received from said pharmacy information system for a patient to a corresponding portable data terminal in said respective patient unit for display on said portable data terminal, said test information and said medication related

information include tasks to be performed on said patient in said respective unit". Thus, in the claimed arrangement a doctor may order a test order, where information relating to the test order for a particular patient is communicated to a control server, "for forwarding to the appropriate portable data terminal" (page 12, lines 5-13). Nowhere in Gombrich is this feature suggested or mentioned. Gombrich merely describes unidirectional communication from the barcode reader to a computer terminal and NOT integrated bidirectional communication between a plurality of portable data terminals in different patient units and laboratory and/or pharmacy information systems. Consequently, it is respectfully submitted that the rejection of claim 3 under 35 USC 102(b) be withdrawn.

Claim 4 is dependent on claim 1 and is considered patentable for the reasons presented above with respect to claim 1. Consequently, it is respectfully submitted that the rejection of claim 4 under 35 USC 102(b) be withdrawn.

Claim 5 is dependent on claim 1 and is considered patentable for the reasons presented above with respect to claim 1. In addition, claim 5 is also considered patentable because Gombrich fails to disclose or suggest that "said plurality of terminal servers each providing bidirectional communication between said plurality of portable data terminals and said control server" as recited in amended claim 5 of the present arrangement. "Multiple portable data terminals . . . [are] in two-way communication with control server 20. Such multiple portable data terminals 40 are capable of interfacing and transferring information between information processing systems 10 and portable data terminals 40 through control server 20" (page 8, lines 19-23). Gombrich makes no mention of providing two-way or "bidirectional communication" between a control server and portable data terminal. As discussed above regarding claim 1, Gombrich merely describes a bar code reader device that is connected to a computer system (col. 10, line 1-14). Consequently, it is respectfully submitted that the rejection of claim 5 under 35 USC 102(b) be withdrawn.

Claim 6 is dependent on claim 1 and is considered patentable for the reasons presented above with respect to claim 1. Consequently, it is respectfully submitted that the rejection of claim 6 under 35 USC 102(b) be withdrawn.

Claim 7 is dependent on claim 1 and is considered patentable for the reasons presented above with respect to claim 1. Claim 7 is also considered patentable because Gombrich fails to disclose or suggest "a bar code scanner for reading identification information from a patient identification code for use in associating a patient identifier with at least one of (a) test information being conveyed to said laboratory information system and (b) medication related information to said pharmacy information system; a printer for printing a corresponding information label including information read by said bar code scanner and conveyed to said laboratory information system and said pharmacy information system; and a microprocessor electrically coupled to said bar code scanner and said printer for storing data relating to said identification information and said printed information label and communicating said at least one of (a) test information being conveyed to said laboratory information system and (b) medication related information to said pharmacy information system for automatic integration into a patient record" as in the claimed arrangement.

The present arrangement uses a "control server 20 in two-way communication with each of information processing systems 10, and with each of the one or more portable data terminals 40. Through such communication, the control server 10 can manage information relating to the patient by transferring such information between each of information processing systems 10, between each of portable data terminals 40, as well as between information processing systems 10 and portable data terminals 40" (page 7, lines 11-18). Gombrich is wholly unlike the claimed arrangement because it merely reads data and transmits that data to a computer. Gombrich fails to disclose or suggest the integration between bedside care via a portable data terminal and information from a laboratory and/or pharmacy information system. Consequently, it is respectfully submitted that the rejection of claim 7 under 35 USC 102(b) be withdrawn.

Claim 8 is dependent on claim 1 and is considered patentable for the reasons presented above with respect to claim 1. In addition, claim 8 is considered patentable because Gombrich does not disclose or suggest that "said test information and medication related information associated with said patient and communicated by said microprocessor to said laboratory information system and pharmacy information system is used in determining a healthcare task to be performed on said patient and said microprocessor receives data representing said determined task for display on said portable data terminal" as recited in amended claim 8 of the present arrangement. While Gombrich describes a bar code reading

device with a microprocessor that supports input/output (col. 11, lines 6-21), Gombrich does not mention that test information and medication related information are communicated by the microprocessor to be used in determining a healthcare task to be performed on a specific patient. Moreover, there is no bidirectional communication between the barcode reader of Gombrich and any other computer. Thus, Gombrich neither discloses nor suggests that the information communicated from the portable data terminal to a respective information processing system is used to determine a healthcare task to be performed. This task is subsequently communicated back to the portable data terminal for display thereon notifying a healthcare professional that task performance is required. Consequently, it is respectfully submitted that the rejection of claim 8 under 35 USC 102(b) be withdrawn.

Claims 9 - 11 are dependent on claim 1 and is considered patentable for the reasons presented above with respect to claim 1. Consequently, it is respectfully submitted that the rejection of claims 9-11 under 35 USC 102(b) be withdrawn.

Amended independent claim 12 recites a system for managing sample collection information and medication information relating to a patient in a hospital environment. A laboratory information processing system processes sample collection information relating to a patient for use in determining at least one healthcare task to be performed on said patient. A pharmacy information processing system processes the medication information relating to the patient for use in determining the at least one healthcare task to be performed on said patient. A control server enables bidirectional communication with the laboratory information processing system, the pharmacy information processing system and a portable data terminal. The portable data terminal enables managing and displaying the sample collection information and the medication information relating to the patient received by the portable data terminal and including the at least one healthcare task to be performed on the patient including collecting a sample from said patient and administering medication to said patient. The portable data terminal periodically communicates with the control server for intermittent interfacing with the laboratory information processing system for receiving the sample collection information relating to the patient and with the pharmacy information processing system for receiving the medication information relating to the patient. Data may be input including sample collection data and medication administration data by a healthcare professional at a patient bedside. The sample collection data relating to the patient taken in response to the sample collection information is transferred from the portable data terminal to

the laboratory information system. Medication data relating to the patient and administered in response to the medication information is transferred from the portable data terminal to the pharmacy information system for incorporation into a patient record. Claim 12 is considered patentable for the reasons presented above with respect to claim 1.

Claim 12 is also considered patentable because Gombrich fails to disclose or suggest "managing and displaying said sample collection information and said medication information relating to said patient received by said portable data terminal and including said at least one healthcare task to be performed on said patient including collecting a sample from said patient and administering medication to said patient" as recited in amended claim 12. There is nothing in Gombrich that provides for displaying information on a portable device usable at a patient bedside conveying medication and lab test result information to a clinician and receiving input from a nurse (e.g. an indication that medication has been administered) supported by bidirectional communication between a laboratory information system, pharmacy information system and portable device. Gombrich merely shows a barcode scanner. Nothing in Gombrich discloses or suggests "displaying said sample collection information and said medication information relating to said patient received by said portable data terminal and including said at least one healthcare task to be performed on said patient including collecting a sample from said patient and administering medication to said patient". In fact, Gombrich is wholly unable to operate in the intended manner because the barcode scanner, which is being equated with the claimed portable data terminal, is only able to communicate bar code related data in a unidirectional manner and NOT pharmacy or laboratory related information bidirectionally as in the claimed arrangement. Gombrich fails to provide for integration of the computer terminals directly with the barcode reader and thus is unable to operate in a manner equivalent to the claimed arrangement. Specifcally, Gombrich fails to disclose or suggest a portable device for "managing and displaying" of information that is received at a patient bedside and supported by bidirectional communication between a laboratory information system, pharmacy information system and the portable device.

Additionally, Gombrich neither discloses nor suggests "periodically communicating with said control server for intermittent interfacing with said laboratory information processing system for receiving said sample collection information relating to said patient and with said pharmacy information processing system for receiving said medication information relating to said patient" as recited in amended claim 12 of the present arrangement. As

discussed above, the system of Gombrich is composed of merely a lab terminal, pharmacy terminal and bar code reading device (Fig. 15). It is not possible for the system of Gombrich to participate in periodic communication with the control server for "intermittent interfacing" to receive data other than that which is scanned by the barcode reader. There is no enabling disclosure that the barcode reader in Gombrich is able to interface with a laboratory information processing system or a pharmacy information processing system and receiving information therefrom for display to a healthcare professional charged with implementing a healthcare task.

Claim 12 is additionally considered patentable because Gombrich neither discloses nor suggests "enabling input of data including sample collection data and medication administration data by a healthcare professional at a patient bedside" as recited in amended claim 12 of the present arrangement. Gombrich describes a system where a hospital staff member "will access from a terminal 45a a drug data file stored in the computer system 42 to display at the terminal 45a the list of drugs after scanning the patient identifier bar code 51 on the patient's chart. The staff person will then enter each scanned drug's dosage and frequency of administration via the terminal 45b. This enters into the computer system 42 the patient's name, drugs, dosage and times of day they are to be administered. This information is stored in the computer's system memory as a data file correlating the patient and drug information (col. 13, lines 32-49). There is no mention, suggestion or recognition of display of medication and laboratory related information by a portable device as well as acquisition of medication related data (not just bar code information) by the device "at a patient bedside" as described in the present claimed arrangement. In Gombrich, the healthcare professional or staff member must physically go to a terminal to input data. The specification of the present claimed arrangement specifically provides for a nurse at the bedside of a patient, using the portable data terminal to input data with regards to sample collection data and medication administration data (page 14, lines 25-30).

Furthermore, claim 12 is considered patentable because Gombrich does not disclose or suggest "transferring sample collection data relating to said patient taken in response to said sample collection information from said portable data terminal to said laboratory information system and medication data relating to said patient administered in response to said medication information from said portable data terminal to said pharmacy information system for incorporation into a patient record" as recited in amended claim 12 of the present

arrangement. In the claimed arrangement, the portable data terminal provides an indication that a certain task need be performed in response to "sample collection information" and "medication information". Gombrich fails to disclose or suggest a portable device able to receive such information and thus fails to disclose or suggest transferring data obtained in response to "sample collection information" and "medication information" received by the portable data terminal. Thus, in the present claimed arrangement, the portable data terminal is completely integrated with the control server, and all information processing systems. This is not the case in Gombrich. Consequently, it is respectfully submitted that the rejection of claim 12 under 35 USC 102(b) be withdrawn.

Claim 13 is dependent on claim 12 and is considered patentable for the reasons presented above with respect to claim 12. Consequently, it is respectfully submitted that the rejection of claim 13 under 35 USC 102(b) be withdrawn.

Amended independent claim 14 is considered patentable for the reasons presented above with respect to claims 1 and 12. Consequently, it is respectfully submitted that the rejection of claim 14 under 35 USC 102(b) be withdrawn.

Claim 16 is dependent on claim 14 and is considered patentable for the reasons presented above with respect to claim 14. Consequently, it is respectfully submitted that the rejection of claim 16 under 35 USC 102(b) be withdrawn.

Amended independent claim 17 is considered patentable for the reasons presented above with respect to claims 1, 12 and 14 Consequently, it is respectfully submitted that the rejection of claim 17 under 35 USC 102(b) be withdrawn.

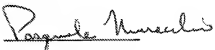
Claim 18 is dependent on claim 17 and is considered patentable for the reasons presented above with respect to claim 17. Consequently, it is respectfully submitted that the rejection of claim 18 under 35 USC 102(b) be withdrawn.

Claim 19 is dependent on claim 17 and is considered patentable for the reasons presented above with respect to claim 17. Consequently, it is respectfully submitted that the rejection of claim 19 under 35 USC 102(b) be withdrawn.

Having fully addressed the Examiner's rejections, it is believed that, in view of the preceding amendments and remarks, this application stands in condition for allowance. Accordingly then, reconsideration and allowance are respectfully solicited. If, however, the Examiner is of the opinion that such action cannot be taken, the Examiner is invited to contact the applicant's attorney at the phone number below, so that a mutually convenient date and time for a telephonic interview may be scheduled.

Respectfully submitted,

Steve Savitz



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